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Electoral Political-Business Cycles in Emerging Markets

Evidence from Turkey

Our research has sought to determine whether Turkish governments applied opportunistic fiscal or monetary policies prior to elections in order to increase their chances of reelection during the 1987–99 period. We further investigated, by using key indicators of economic performance, the post-election effects of the way fiscal and monetary instruments were used just prior to elections. Our research differed from previous studies on three counts. First, although there exists extensive empirical literature testing the Political-Business Cycle (PBC) hypothesis for major developed countries, there is a serious lack of similar studies for developing countries and emerging markets with developing markets and institutions. This paper aims to fill this gap in the literature. In fact, ours was one of the first empirical studies to discuss Electoral Political-Business Cycles in Turkey, a developing country and an emerging market.[1] Secondly, we used an extensive data set, including all important economic policy instrument and indicators, which are particularly extensive for budget items. Finally, our study was the first to use monthly data to test the PBC hypothesis. The empirical results suggest that, like some of the developed countries, Turkey has electoral political-business cycles.

There are two main schools of thought concerning the common notion of politic intervention in economic policy. The first line of thought,

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the Partisan Political-Business Cycle initiated by Hibbs (1977), deals with the characteristic differences in the economic policies of governments according to their ideological preferences. However, Partisan PBCs will not be considered in this paper because Sayan and Berument (1997) tested such cycles in Turkey for the 1957–94 time period. Their empirical results showed no significant evidence of Partisan PBCs. Hence, this study is mainly concerned with the validity, within the Turkish context, of the other line of thought, namely Electoral Political-Business Cycles.

Initiated by Nordhaus (1975) and Lindbeck (1976), the Electoral PBC hypothesis argues that a strategic incumbent government would like to show good economic performance before elections and applies expansionary economic policies in order to influence voters and maximize its chance of reelection. Typically, the incumbent government expects to influence voters by adopting policies that increase output or decrease unemployment using the exploitable Phillips curve trade-off. Furthermore, the opportunistic manipulations done in the pre-electoral period may have important effects on post-electoral economic performance. For instance, when the rate of inflation begins to rise after the elections as a result of expansionary fiscal and monetary policies, the incumbent government could try to decrease inflation by applying post-electoral contractionary fiscal and monetary policies, leading to a recession in the post-election period. As a result, the economy would contract, and would be ready for a new pre-election upswing before the next elections. Hence, Electoral PBC theory suggests that there are systematic variations at some certain macroeconomic indicators, coinciding with election periods.

Empirical studies testing Electoral PBC hypothesis have been carried out for major developed counties (see McCallum, 1978; Alesina and Sachs 1988; Rogoff 1990; Alesina and Roubini 1992; and Alesina et al. 1997). The results of these empirical studies have been mixed, however, and have provided little or no evidence in support of the Electoral PBC hypothesis. Rogoff and Sibert (1988), considering economic policy instruments, stated that an incumbent government reduces taxes or increases government spending before elections in order to be viewed as more competent than the opposition. As a consequence of signaling an electoral cycle, Budgetary Political-Business Cycles emerge in the fiscal variables. Although the voters dislike deficits[2] (Tabellini and Alesina 1990), all the traditional and recent versions of the Budgetary PBC hypothesis assert that an increase in the fiscal deficit should be observed

before elections, since the incumbent government will cheat by applying expansionary or loose fiscal policies before elections (Laney and Willett 1983; Alesina et al. 1997). However, there is no agreement on the source of this fiscal deficit. The reason may be either the reduction in taxes or the increase in government expenditures. Both of these can be observed simultaneously, as well. Alesina and Roubini (1992) found that government spending has a tendency to increase, and tax revenues have a tendency to decrease before elections; but, the electoral dummies do not turn out to be statistically significant in their analysis. Besides, using data from the United States (1960–93), Alesina et al. (1997) found that the deficit is higher in election years, but that the pre-electoral dummy is again not statistically significant. However, the estimated coefficient of pre-electoral dummy for the deficit is statistically significant for OECD countries. Moreover, they found not only an increase in government spending, but also a decrease in tax revenues for OECD countries. Unfortunately, the estimated coefficients of government spending and tax revenues are not statistically significant. Furthermore, they tested sub-components of government spending such as government transfers and social security expenditures, but found no statistically significant evidence of Electoral PBCs. Rogoff (1990) considered components of government spending and claimed that pre-electoral signaling will increase government spending. But, the budget cycle will appear as distortions in the allocation of the public resources; and consequently, this will lead to reductions in public investment spending. Moreover, voters can recognize investment spending only with a lag. Thus, instead of spending on investment projects, the incumbent government favors to programs whose effects are more quickly visible.

Laney and Willett (1983) considered the United States and claimed that, over the 1960–76 period, the federal deficit was monetized before presidential elections. Furthermore, Rogoff and Sibert (1988) pointed out the monetarization of the deficit before elections, and asserted that voters can understand the effects of monetarization on inflation only with a lag. Alesina, et al. (1997) considered monetary policy and found statistically significant evidence of monetary expansion, not in the United States, but in the OECD countries. While Ito and Park (1988) studied Japan and found no evidence of expansionary monetary policy, Heckelman and Berument (1998) found significant evidence of loose monetary policy before elections in Japan.

Alesina (1989), Alesina and Sachs (1988), Alesina and Roubini (1992),

and Alesina et al. (1993; 1997)—considering policy outcome tests—rejected the main implications of increasing growth and decreasing unemployment in election years. Alesina, et al. (1997) tested Electoral PBCs for both the United States and some OECD countries, but found no evidence of increasing output growth and decreasing unemployment for either case. Moreover, Heckelman and Berument (1998) found no evidence of increasing output in Britain or Japan. Alesina et al. (1997) also considered inflation, but found no evidence of decreasing inflation prior to elections, neither in the United States nor in OECD countries. However, they did find evidence of increasing inflation in the post-election period in OECD countries.

Under an election system that has varying election timing, Ito and Park (1988) suggested an alternative hypothesis, Opportunistic Election Timing (OET). The OET hypothesis suggests that, instead of manipulating the economy, the incumbent government can call an early election when economic performance is good. There is no risk of inflation after elections; therefore, choosing the appropriate time to call elections is easier than manipulating the economy. Their empirical analysis testing the implications of Opportunistic Election Timing suggests that Japan is more likely to call early elections when the growth is high. While Alesina et al. (1993) rejected the implications of the OET hypothesis for all the OECD countries except Japan in their data, Heckelman and Berument (1998) considered Japan and Britain and found significant evidence supporting the OET hypothesis for monetary growth in Japan, contrary to Ito and Park.

The rest of this paper is organized as follows. The second section gives information about the history of elections in Turkey. Third, we describe the data; and the methodology is discussed in the fourth section. The empirical findings are reported in the fifth section, followed by a summary.

Historical Background and Turkish Studies

Before the elections on October 6, 1983, a military government was in office; therefore, it did not need to manipulate the economy to impress voters.[3] Besides, there was a lack of politic competition among the parties in this election because some ex-party leaders were prohibited from taking part in politics. Full political competition in Turkey restarted in 1987 when the referendum allowing pre-1980 era party leaders to cam-

paign took place (Onis 1997). Full political competition is necessary to test political-business cycles, because its absence may lead the incumbent government to decide on economic policies and outcomes without any political anxiety. The government may realize that it has no strong opposition; therefore, it may not find it worthwhile to put on its best performance. Thus, this paper deals with the time period allowing full politic competition.

There were four elections in the time period under study. The first one took place on November 29, 1987; the second was held on October 20, 1991. The third and the fourth elections were on December 24, 1995 and April 18, 1999, respectively. Although the electoral system for each election differed in some ways, their characteristics were basically the same. First of all, the Turkish election system is flexible; therefore, the government has the chance to call for early elections. In fact, with the exception of the one in 1987, all the elections were early and were announced approximately three or four months before the election date. The second common characteristic of the elections was the "10 percent minimum." A party had to get at least 10 percent of the votes around the country to be represented in the parliament. In fact, high party fragmentation made it difficult for some parties to exceed this 10-percent minimum. As a result, some popular parties that did not temporarily merge with other parties were not able to meet this requirement, and were not represented in the parliament following the 1991, 1995, and 1999 elections.

In the remaining part of this section, a recent study will be discussed. Ozatay (1999), considering a quarterly data set from 1985 to 1995, found statistically significant evidence of expansionary monetary and fiscal policies using net domestic assets and other transfers. Thus, he concluded that politicians manipulated the economy using fiscal and monetary policies prior to elections. However, he did not consider budget deficits, tax revenues or personnel and investment spending, which are often used in literature studies as channels for the government to signal its competency. Furthermore, he did not consider the interest rate as a policy instrument. However, Berument and Malatyali (1998) claimed that the Turkish Central Bank used the inter-bank rate as an instrument to target M2Y. In the post-election period, Ozatay considered inflation, but not fiscal and monetary instruments. Thus, this paper completes his work. Ozatay also found evidence of increasing inflation in the post-election period. Finally, he tested the gap between the rates of increase

in public and private sector prices, and found supporting evidence that the gap significantly increases prior to elections, although it is eliminated just after the elections.

Ozatay considered national elections and municipal elections jointly in his analysis. However, in this study national and municipal elections were considered separately. In addition, the empirical evidence suggested that while although municipal elections have no significant effects on policy instruments and economic indicators, general elections have statistically significant effects. The reason for this difference between types of elections may be the fact that, in the municipal elections, it is not the amount of the expenditures by the government, but the allocations throughout the country that changes. Thus, this study discusses the empirical results of the effects of general elections only.

Data

The data set includes monthly data for fiscal and monetary policy indices and measures of economic performance, such as inflation and output indicators between January 1985 and May 1999. There are three reasons for choosing this period. Firstly, fiscal and monetary figures and inflation and production indicators are only readily available after 1985. Secondly, the pre-electoral effects of the 1987 elections are yet to be examined. Finally, this period saw full political competition, as discussed above.

In the empirical literature studies of political-business cycles, monthly data is not generally studied. Furthermore, the data sample in this study is small compared to the literature studies (see Laney and Willett 1983; Alesina and Sachs 1988; Ito and Park 1988; Alesina and Roubini 1992; Alesina et al. 1997; and Heckelman and Berument 1998). However, using high-frequency data (e.g., monthly) increases the number of observations and provides a way to examine the policies applied by the government more sensitively. Moreover, high political instability existed in Turkey during the time period under study. In fact, the government changed three times between 1995 and 1999 because of conflicts between the coalition partners. Thus, monthly data provides a means of examining the economic behavior of frequently changing governments.

The fiscal data consists of the central government's consolidated budget with both revenue and expenditure items. Revenue items include total revenues, tax revenues, direct and indirect revenues, while non-tax

revenues usually include portfolio, interest, and rent revenues. Other revenues usually include budgetary fund revenues and central bank short-term advances. For an incumbent government, all the above items are channels for signaling by applying opportunistic policies before elections. For instance, the government can decrease the rent of the houses provided for its employees or dismiss fines before elections. A more populist tactic would be a tax amnesty.

Expenditure items of the consolidated budget consist mainly of total expenditures, non-interest expenditures, personnel, and investment expenditures. Other current expenditures usually include defense expenditures and transfers to state economic enterprises (SEEs). Other transfers usually include transfers to social security institutions, municipalities, agricultural subsidy institutions, support and price stabilization funds, and off-duty losses. The government decides the amount and the allocation of the government expenditures. Therefore, government expenditures are more likely than revenues to be channels for implementing opportunistic policies. In fact, between 1987 and 1998, the average ratio of total revenues to the GNP was 18.0 percent, whereas the average ratio of expenditures to the GNP was 23.3 percent. Hence, expenditure items are not only more feasible than revenues for implementing opportunistic, but they are also larger in amount compared with revenues.

Next, "budget deficit" is defined as the difference between government expenditures and revenues, and is included in the data for examining the interaction between revenues and expenditures during election periods. The deficit gives more information about the type of fiscal policy (tight or expansionary). The budget deficit is taken as positive when total government expenditures exceed its total revenues. However, in a country like Turkey, where on the average 7.3 percent of the GNP between 1985 and 1998 was government interest expenditures, primary deficit is more appropriate for determining the type of fiscal policy; thus, it is included in the data set.[4] In the regressions, all the fiscal variables are taken as their ratios to total revenues, because our study aims to test how the behavior of any fiscal variable compares with the behavior of other fiscal variables during election periods. Fiscal data is taken from the Turkish Ministry of Finance, General Directorate of Public Accounts monthly bulletins, and the Turkish Central Bank's electronic data delivery system (CBEDS) for the time period January 1985 to May 1999.

Monetary data consists of monetary aggregates and interest rates.

Monetary aggregates are quasi-money, which is mainly time deposits plus central bank liabilities, reserve money (M0), M1, M2, and M2Y, where M2Y is M2 plus the foreign time deposits. Monetary aggregates are taken from the International Monetary Fund's financial series (IFS), and cover the time period from January 1985 through October 1998, because this data is readily available for that time period. The interest rate data set includes five different interest rates: the three-month Turkish lira (TL) time deposit rate, the three-month United States (US) dollar time deposit rate, nominal and real treasury auction rates, and the inter-bank rate. These five interest rates have been chosen because, firstly, the inter-bank rate is an instrument of the central bank used to manipulate the money market, and reflect the short-term market rate. In fact, Berument and Malatyali (1998) have shown that Turkish Central Bank uses the inter-bank rate as an instrument to target M2Y. Secondly, the three-month TL and U.S. time deposit rates reflect the demand for TL and foreign currency. Treasury auction rates are not related to monetary policy, and they reflect only the borrowing ease of the Treasury; but they are discussed in this paper because they are interest rates. The nominal treasury auction rate is calculated as the weighted average of interest rates of Treasury auctions during that month, and the real Treasury auction rate is calculated by deflating the nominal Treasury auction rate with the wholesale price index (WPI). Time deposit and foreign currency deposit rates are taken from the central bank's electronic delivery system (CBEDS) for January 1985 through July 1999. Nominal Treasury rates are taken from the Turkish State Planning Organization's (SPO) economic indicators covering the time period from July 1987 to May 1999. The inter-bank rate, taken from IFS, covers the period from January 1985 to October 1998, because the data is readily available for that time period. All the monetary aggregates and interest rates, except the inter-bank rate, are used as the logarithmic monthly growth in the regressions because they are non-stationary (see Table 7 on p. 27).

Our study considers the pre-electoral effects of fiscal and monetary policies on inflation. Therefore, the consumer price index (CPI) and WPI are included in the empirical analysis. In order to examine the reactions of the public and private sector to pre-electoral manipulations, public sector and private sector WPIs are included in the data. The public sector WPI reflects the price level of government goods and services, the private sector WPI reflects the price level of private goods and services, and the WPI is the weighted average of the two. In the

regressions, the logarithmic monthly growth of the indices are used, because all of the indices are non-stationary (see Table 7). The three WPIs are taken from the CBEDS, whereas the WPI was calculated by the Turkish Treasury for the time period January 1985 to July 1999, and the CPI is taken from Turkish State Statistics Institute (SSI) for the time period January 1987 to May 1999.

The industrial production index is used as a proxy for output, instead of the real GDP, because monthly real GDP is not available for Turkey. Hence, the industrial production index is used to examine the effects of the manipulations on output during elections. As for the price indices, the logarithmic monthly growth is used for the industrial production index, which is also non-stationary (see Table 8 on p. 28). The industrial production index is taken from the Turkish State Statistics Institute for the time period January 1986 to May 1999.

Methodology

To test the implication of the PBC theory, the following model (Model 1) is estimated.

$$y_t = \alpha + \sum_{i=1}^{n} \beta_i y_{t-i} + \delta_t d_{kt} + \sum_{i=1} s_i + \varepsilon_i \qquad (1)$$

$k = 1, 2, \ldots 6$

where y is the policy variable and is assumed to follow an autoregressive process. It is also assumed that this process is interrupted by elections, as measured by the dummy term d_{kt}; ε_t is the error term at time t; n is the lag order, and is specified by looking at Akaike information criterion; and k is the month the dummy represents.[5] The coefficient δ_k of the dummy variable d_{kt} is tested under the null hypothesis (H_0: $\delta_k = 0$). This type of specification is often used in the literature.[6]

An alternative methodology, to see the effects of elections on y_t, is to estimate the above using the electoral dummies all together and considering the null hypothesis that each coefficient of the dummies is equal to zero. However, there may exist a multi-colinearity problem among the electoral dummies and the policy variable y_t in such a model.

The estimates of Model 1 via OLS will be biased if the considered cyclic policy variables and economic indicators influence election tim-

ing. In the real world, such a situation may occur if the incumbent government calls an early election when economic performance is going well, as noted above (Ito and Park 1988). Ito and Park (1988) and Alesina et al. (1993) have suggested different procedures to test the endogeneity of elections. This paper follows the methodology of Heckelman and Berument (1998) and tests the endogeneity of election timing using the Hausman Specification test procedure (1978).

In order to account for the endogeneity of election timing, the instrument variable, d^*_{kt}, is included in Model 1 as:

$$y_t = \alpha + \sum_{i=1}^{n} \beta_i y_{t-i} + \delta_t d_{kt} + \delta_t d^*_{kt} + u_t \qquad (2)$$

Then, Hausman's (1978) second test is applied under the null hypothesis ($H_0 = \delta^*_k$) to check if a simultaneity bias problem exists.[7] If the null is rejected, then election timing will be endogenous for y_t and the model will be misspecified, leading to biased results via OLS. In such a case, this paper uses the instrument variable (IV) technique to estimate the equations. However, if the null hypothesis is not rejected, election timing will be exogenous for y_t and the OLS estimation will give unbiased consistent results. With the scope of this paper, endogenous election timing is expected for the variables that government cannot control directly, or has less power to control. Thus, election timing may be endogenous for government revenues, the items whose levels the government does not have the express power to decide.[8] But, it should be exogenous for government spending (Keil 1988), since the government can decide on its own expenditures. Moreover, the Turkish Central Bank is not considered as an independent central bank; thus, money supply equations should have exogenous election timing. Finally, with respect to spending and money supply equations, the equations of economic indicators, such as output growth and inflation, are more likely to have endogenous election timing. In fact, the results of the Hausman test support this intuition.

Finally, pre- and post-electoral effects of elections on policy variables are examined using two alternative types of electoral dummies d_{kt} and pd_{kt}. The d_{kt}s are constructed such that they are equal to one in the election month and for the k months before the elections, and zero otherwise. The second type of the electoral dummies, dp_{kt}, are constructed such that they are equal to one in the election month and k months after the elections, and zero otherwise.

Empirical Evidence and Discussion

Table 1 presents the evidence of the elections in the pre-election period via OLS. Firstly, the empirical evidence on fiscal variables will be discussed. The empirical evidence suggests that government expenditures statistically significantly increase before elections and government expenditures have the highest correlation with the electoral dummy representing one month before elections. Moreover, there is statistically significant increase in the estimated coefficients for non-interest expenditures and personnel expenditures are statistically significant prior to elections. Non-interest expenditures and personnel expenditures have the highest correlation with the pre-electoral dummy representing three months and two months before elections. The estimates of investment expenditures, contrary to Rogoff (1990), show statistically significant increase prior to elections. Furthermore, the empirical evidence suggests that the estimated coefficient of other transfers significantly increases before elections, and other transfers have the highest correlation with the pre-electoral dummy representing three months before elections. This "other transfers" item is appropriate for implementing populist policies, including social security, and agricultural and price subsidies. Thus, the empirical evidence suggests that the Turkish government significantly used this expenditure item before elections. This result is also consistent with Ozatay (1999). Moreover, the estimated coefficient of transfers to the SEEs shows a statistically significant increase before elections, while transfers to the SEEs have the highest correlation with the pre-electoral dummy representing the three months before elections. In fact, the Turkish government used the SEEs as an instrument for the reallocation of resources. The empirical evidence suggests that this reallocation process accelerates prior to elections. Hence, the empirical evidence suggests that more of total revenues are channeled towards government expenditures. The overall empirical evidence is parallel with the PBC theory, where the government adopts expansionary fiscal policies to manipulate the economy before elections.

As mentioned above, a simultaneous endogeneity problem may arise for revenue items. Before discussing pre-electoral effects on revenues, the Hausman test, based on Model 2, is applied to the revenue items. Table 2 presents Hausman test statistics for revenue items. Given our choice of instrument variables, Hausman statistics are significant for direct and indirect tax revenues, and an equation for tax revenues. The

Table 1

Effects of Elections in the Pre-Election Period, via OLS

	d_1	d_2	d_3	d_4	d_5	d_6
Expenditures	0.333***	0.229***	0.211***	0.103	0.078	0.054
	(3.250)	(2.642)	(2.851)	(1.526)	(1.246)	(0.919)
Non-interest expenditures	0.186**	0.148**	0.158***	0.086*	0.063	0.073*
	(2.543)	(2.401)	(2.995)	(1.763)	(1.365)	(1.694)
Personnel expenditures	0.041*	0.040**	0.033**	0.027*	0.023	0.022*
	(1.723)	(2.053)	(1.977)	(1.801)	(1.596)	(1.658)
Investment expenditures	0.034*	0.022	0.017	0.013	0.010	0.009
	(1.720)	(1.381)	(1.181)	(0.993)	(0.813)	(0.785)
Other current expenditures	–0.003	0.004	0.001	0.000	0.002	0.002
	(–0.275)	(0.490)	(0.106)	(0.048)	(0.322)	(0.284)
Other transfers	0.062	0.040	0.061**	0.029	0.022	0.023
	(1.506)	(1.162)	(2.080)	(1.091)	(0.905)	(1.015)
Transfers to SEEs	0.035**	0.028**	0.039***	0.028***	0.023**	0.023**
	(2.304)	(2.186)	(3.554)	(2.851)	(2.464)	(2.574)
Tax revenues	–0.029	–0.017	–0.008	–0.016	–0.012	–0.013
	(–1.195)	(–0.852)	(–0.451)	(–1.017)	(–0.788)	(–0.934)
Direct taxes	–0.015	–0.011	–0.010	–0.020*	–0.018	–0.019*
	(–0.816)	(–0.722)	(–0.709)	(–1.673)	(–1.651)	(–1.828)
Indirect taxes	–0.002	–0.003	0.000	–0.003	0.002	0.004
	(–0.088)	(–0.199)	(–0.039)	(–0.245)	(0.153)	(0.427)
Non-tax revenues	–0.004	–0.008	–0.012	–0.008	–0.007	–0.009
	(–0.212)	(–0.501)	(–0.911)	(–0.669)	(–0.646)	(–0.898)
Other revenues	0.024	0.012	0.003	0.012	0.009	0.011
	(0.991)	(0.590)	(0.159)	(0.771)	(0.612)	(0.808)
CB advances	0.085	0.052	0.021	0.026	0.038	0.038
	(1.049)	(0.779)	(0.355)	(0.497)	(0.772)	(0.815)
Primary balance	0.186**	0.148**	0.158***	0.086*	0.063	0.073*
	(2.543)	(2.401)	(2.995)	(1.763)	(1.365)	(1.694)
Budget balance	0.333***	0.229***	0.211***	0.103	0.078	0.054
	(3.250)	(2.642)	(2.851)	(1.526)	(1.246)	(0.919)
Quasi-money	0.037***	0.024**	0.015	0.010	0.009	–0.003
	(2.939)	(2.298)	(1.600)	(1.147)	(1.121)	(–0.369)
Reserve money	0.008	0.002	–0.007	–0.007	–0.019	–0.004
	(0.206)	(0.082)	(–0.281)	(–0.313)	(–0.881)	(–0.217)
M1	–0.018	–0.013	–0.019	–0.015	–0.014	–0.011
	(–0.724)	(–0.654)	(–1.116)	(–0.951)	(–0.979)	(–0.870)
M2	0.027**	0.016*	0.007	0.007	0.006	0.001
	(2.476)	(1.820)	(0.890)	(0.984)	(0.888)	(0.216)
M2Y	0.029**	0.019**	0.009	0.009	0.008	0.001
	(2.567)	(1.998)	(1.114)	(1.200)	(1.106)	(0.079)
Time deposit rate	0.033	0.013	0.012	–0.009	–0.022	0.039
	(0.291)	(0.143)	(0.152)	(–0.127)	(–0.327)	(0.602)
U.S. dollar time	0.063	0.020	0.027	–0.007	0.015	–0.017

(*continues*)

Table 1 *(continued)*

deposit rate	(0.632)	(0.236)	(0.367)	(–0.098)	(0.244)	(–0.287)
Treasury bill rate	0.016	0.015	0.008	0.000	0.001	0.003
	(0.763)	(0.839)	(0.513)	(–0.002)	(0.109)	(0.208)
Real treasury bill rate	0.038	0.034	0.031	0.019	0.016	0.014
	(1.494)	(1.627)	(1.627)	(1.087)	(0.931)	(0.883)
Inter-bank rate	–0.033	–0.031	–0.047	–0.033	–0.029	–0.026
	(–0.762)	(–0.861)	(–1.526)	(–1.179)	(–1.116)	(–1.060)
Monthly growth rate of CPI	–0.004	–0.003	–0.005	–0.003	–0.003	–0.003
	(–0.456)	(–0.403)	(–0.851)	(–0.531)	(–0.548)	(–0.646)
Monthly growth rate of WPI	–0.001	0.003	0.002	0.001	–0.004	–0.003
	(–0.040)	(0.244)	(0.192)	(0.094)	(–0.404)	(–0.362)
Monthly growth rate of private WPI	0.000	–0.002	0.000	0.001	–0.006	–0.002
	(–0.050)	(–0.260)	(0.067)	(0.150)	(–1.262)	(–0.601)
Monthly growth rate of public WPI	–0.008	–0.006	–0.010	–0.012	–0.011	–0.014
	(–0.480)	(–0.472)	(–0.859)	(–1.122)	(–1.141)	(–1.555)
Monthly increase in industrial production index	0.043**	0.020	0.011	–0.005	0.002	0.002
	(2.241)	(1.261)	(0.759)	(–0.425)	(0.163)	(0.187)

*Indicates 10% significance level.

**Indicates 5% significance level.

***Indicates 1% significance level.

t-statistics are reported in parentheses for the corresponding coefficient.

estimates via OLS will be biased; therefore, the estimates via IV will be discussed for direct and indirect tax revenues.

Table 3 presents the empirical evidence of the effects of elections on revenue items via IV. The empirical evidence presented in Table 1 and Table 3 suggest that the estimated coefficients for tax revenues and direct taxes decrease prior to elections. In fact, the decrease in direct revenues is statistically significant, but the estimated coefficient for indirect tax revenues is mixed. The empirical evidence also suggests that there is a decrease in the estimated coefficients of non-tax revenues, whereas there is an increase in the estimated coefficients of other revenues and short-term advances.

As a consequence of expansionary fiscal policies, the fiscal deficit is expected to increase prior to elections. Hence, the empirical evidence presented in Table 1 supports the PBC hypothesis that the budget deficit increases prior to elections. In fact, the estimated coefficient of the budget deficit increases statistically significantly in the pre-election period. Although the Turkish budget usually has a primary surplus, the empirical evidence suggests that the estimated coefficient of the primary defi-

Table 2

Hausman F-test Statistics for Revenues

	d_1	d_2	d_3	d_4	d_5	d_6
Tax revenues	3.704	3.579	3.600	3.641	3.728	4.047*
Direct taxes	5.731*	4.781*	4.210*	3.90**	4.028*	3.957**
Indirect taxes	5.100*	11.052*	7.305*	4.684*	4.607*	6.907*
Non-tax revenues	2.972	2.861	3.016	3.173	2.995	3.134
Other revenues	1.992	2.042	2.039	1.835	1.895	1.942

*Indicates 1% significance level.
**Indicates 5% significance level.

Table 3

Effects of Elections on Revenues in the Pre-Election Period, via IV

	d_1	d_2	d_3	d_4	d_5	d_6
Tax revenues	–0.003	0.001	–0.038	–0.005	0.000	–0.026
	(–0.026)	(0.011)	(–0.684)	(–0.074)	(–0.002)	(–0.351)
Direct taxes	–0.036	–0.035	–0.082***	–0.016	–0.031	–0.030
	(–0.930)	(–1.029)	(–2.758)	(–0.612)	(–1.231)	(–1.245)
Indirect taxes	–0.104*	–0.050	0.062*	–0.047	–0.028	–0.031
	(–1.895)	(–1.153)	(1.788)	(–1.386)	(–0.899)	(–1.019)

*Indicates 10% significance level.
t-statistics are reported in parentheses for the corresponding coefficient.

cit statistically significantly increases in the pre-election period. Both primary and budget deficits have the highest correlation with the electoral dummies representing three months and one month before elections, respectively. The reason for the increase in the deficit is the significant increase in government spending, since the decrease in tax revenues is not statistically significant.

Secondly, the pre-electoral evidence on monetary variables will be discussed. The first type of monetary policy instrument considered in this paper is monetary aggregates. The results presented in Table 1 indicate that the growth rates of quasi-money; M2 and M2Y show statistically significant increases prior to elections. They all have the highest

correlation with the electoral dummy representing the month before elections. Thus, it can be concluded that the empirical evidence supports the hypothesis of expanding monetary policy in the pre-election period. However, the empirical evidence suggests that the estimated coefficient of M1 decreases, whereas the estimated coefficient of reserve money is mixed.

The second type of monetary policy considered in our study is a set of interest rates. The inter-bank rate might be considered as the monetary instrument of the central bank among the interest rates to manipulate the economy. The empirical evidence suggests that in the pre-election period the estimated coefficient of the inter-bank rate decreases, but the correlation between the inter-bank rate and electoral dummies is not statistically significant. Alesina et al. (1997) test long-term interest rates for OECD countries, and they also find no statistically significant decrease in interest rates. In addition, the empirical evidence suggests that the estimated coefficients for nominal and real Treasury auction rates increase prior to elections, while the electoral dummies do not turn out to be significant for them. To sum up, expansionary monetary policies applied using monetary aggregates in the pre-election period. Thirdly, the pre-electoral evidence on inflation will be discussed. The PBC theory suggests that inflation is lower prior to elections, whereas it is higher after elections due to the expansionary fiscal and monetary policies applied in the pre-election period (Nordhaus 1975; Rogoff and Sibert 1988; and Alesina et al. 1997). Furthermore, as mentioned in the previous section, the inflation equation may have endogenous election timing because the government cannot control inflation directly, and inflation is an important indicator of the economic performance of a country. Table 4 presents the Hausman test for inflation. The results indicate that one of the regressions of the CPI suffers from endogeneity. Thus, the empirical evidence via IV, as presented in Tables 1 and 5, suggest that the estimated coefficients for the CPI, the public WPI, and the private WPI are mixed. However, the empirical evidence presented in Table 1 suggests that the estimated coefficient of public sector WPI decreases prior to elections. In fact, the correlation between the growth rate of public sector WPI and elections is negative; therefore, the incumbent government tries to keep the growth rate of public sector goods and services below the growth rate of market prices.

Finally for the pre-election period, the evidence on output will be discussed. The empirical evidence presented in Table 4 suggests that the equations for the industrial production index suffer from endogeneity.

Table 4

Hausman F-test Statistics for Inflation-Output

	d_1	d_2	d_3	d_4	d_5	d_6
Monthly growth rate of CPI	4.125*	2.146	1.848	1.738	1.753	1.868
Monthly growth rate of WPI	1.647	1.757	1.639	1.682	1.881	2.155
Monthly growth rate of private WPI	2.252	2.279	2.669	2.939	2.960	2.803
Monthly increase in industrial production index	10.952*	8.637*	8.638*	8.103*	8.190*	8.034*

*Indicates 1% significance level.

Table 5

Effects of Elections on Inflation-Output in the Pre-Election Period, via IV

	d_1	d_2	d_3	d_4	d_5	d_6
Monthly growth rate of CPI	0.024	0.023	0.023	0.026*	0.026*	0.015
	(1.530)	(1.600)	(1.575)	(1.925)	(1.844)	(1.151)
Monthly increase in industrial production index	0.076	0.058	0.004	–0.004	–0.011	0.001
	(1.102)	(0.982)	(0.110)	(–0.088)	(–0.268)	(0.022)

*Indicates 10% significance level.

t-statistics are reported in parentheses for the corresponding coefficient.

Moreover, the empirical evidence presented in Table 5 suggests that the estimated coefficient of the industrial production index is mixed. Thus, there is no significant increase in output prior to elections.

To conclude, in the pre-election period the empirical evidence suggests that the incumbent government applies expansionary fiscal and monetary policies and tries to keep the growth rate of public sector goods and services low to impress the voters.

The empirical evidence on the post-electoral effects of elections is presented in Table 6. Firstly, the empirical evidence suggests that the

estimated coefficient for total government expenditures increases statistically significantly after elections. Moreover, government expenditures have the highest correlation with the electoral dummy representing two months after elections. Similarly, empirical evidence suggests that non-interest expenditures of the government shows a statistically significant increase after elections and the estimated coefficient for non-interest expenditures has the highest correlation with the dummy representing two months after elections. The empirical evidence also suggests that the estimated coefficients of investment expenditures increase statistically significantly after elections. In fact, investment expenditures have the highest correlation with the electoral dummy representing the first month after elections. Next, empirical evidence suggests that there is an increase in the estimated coefficient of other current expenditures in the post-election period; however, other current expenditures have no statistically significant correlation with the post-electoral dummies. Furthermore, the estimates for the "other transfers" item show a statistically significant increase after elections. Other transfers have the highest correlation with the dummy representing two months after elections. Thus, the government prefers to channel its funds to social security, and to price and agricultural subsidies after elections to realize its promises to voters during the pre-election period. The estimated coefficients of personnel expenditures and transfers to the SEEs have mixed results.

In the post-election period, the empirical evidence suggests that the increase in estimated coefficient of tax revenues is statistically significant after elections and tax revenues have the highest correlation with the electoral dummy representing two months after elections. Similarly, the estimated coefficients of indirect and direct taxes significantly increase after elections and both indirect and direct tax revenues have the highest correlation with the electoral dummy representing two months after elections. Next, non-tax and other revenues show a statistically significant decrease and have significant correlations with the electoral dummy representing two months after elections. Hence, it can be concluded that the ratio of tax revenues to total revenues increases after elections and, although the government continues to increase its spending, it applies tighter tax policies during the post-election period.

As presented in Table 6, the empirical evidence suggests that the estimated coefficients of primary and budget deficits increase in the post-election period. In fact, both primary and budget deficits have the highest

Table 6

Effects of Elections in the Post-Election Period, via OLS

	dp_1	dp_2	dp_3	dp_4	dp_5	dp_6
Expenditures	0.221*	0.243**	0.093	0.034	0.058	0.063
	(1.925)	(2.409)	(1.020)	(0.417)	(0.774)	(0.917)
Non-interest expenditures	0.169**	0.173**	0.093	0.032	0.003	–0.005
	2.155	2.466	1.440	0.545	(0.061)	(–0.104)
Personnel expenditures	–0.018	0.027	0.018	0.006	–0.008	–0.011
	(–0.689)	(1.189)	(0.912)	(0.300)	(–0.470)	(–0.702)
Investment expenditures	0.063***	0.036*	0.018	0.012	0.000	–0.003
	(3.075)	(1.921)	(1.050)	(0.748)	(–0.025)	(–0.220)
Other current expenditures	0.002	0.006	0.008	0.005	0.003	0.003
	(0.204)	(0.609)	(0.962)	(0.617)	(0.369)	(0.435)
Other transfers	0.098**	0.095**	0.055	0.031	0.021	0.013
	(2.258)	(2.533)	(1.613)	(1.001)	(0.716)	(0.499)
Transfers to SEEs	–0.008	0.004	–0.005	–0.012	–0.014	–0.011
	(–0.509)	(0.279)	(–0.363)	(–1.072)	(–1.279)	(–1.058)
Tax revenues	0.007	0.061***	0.041**	0.030*	0.030*	0.027*
	(0.271)	(2.869)	(2.151)	(1.676)	(1.726)	(1.676)
Direct taxes	0.005	0.037**	0.016	0.005	0.007	0.003
	(0.256)	(2.224)	(1.108)	(0.405)	(0.530)	(0.280)
Indirect taxes	0.017	0.036**	0.029**	0.025**	0.020*	0.021*
	(0.901)	(2.305)	(2.101)	(1.991)	(1.691)	(1.959)
Non-tax revenues	–0.012	–0.031*	–0.010	–0.005	–0.001	0.000
	(–0.591)	(–1.864)	(–0.654)	(–0.334)	(–0.057)	(0.029)
Other revenues	–0.010	–0.063***	–0.042**	–0.032*	–0.026	–0.022
	(–0.408)	(–2.984)	(–2.225)	(–1.826)	(–1.590)	(–1.457)
CB advances	–0.004	0.025	0.007	–0.012	0.001	0.012
	(–0.051)	(0.343)	(0.102)	(–0.201)	(0.017)	(0.227)
Primary balance	0.169**	0.173**	0.093	0.032	0.003	0.005
	(2.155)	(2.466)	(1.440)	(0.545)	(0.061)	(0.104)
Budget balance	0.221*	0.243**	0.093	0.034	0.058	0.063
	(1.925)	(2.409)	(1.020)	(0.417)	(0.774)	(0.917)
Quasi-money	0.006	0.006	0.009	0.007	0.005	0.004
	(0.424)	(0.572)	(0.974)	(0.873)	(0.578)	(0.506)
Reserve money	–0.041	–0.045	–0.049*	–0.011	–0.022	–0.036
	(–1.131)	(–1.527)	(–1.918)	(–0.455)	(–1.000)	(–1.749)
M1	–0.006	–0.002	–0.020	–0.003	–0.011	–0.014
	(–0.225)	(–0.120)	(–1.120)	(–0.214)	(–0.740)	(–1.055)
M2	0.020*	0.010	0.005	0.005	0.004	0.004
	(1.764)	(1.046)	(0.562)	(0.679)	(0.564)	(0.594)

(*continues*)

Table 6 *(continued)*

M2Y	0.021*	0.008	0.004	0.003	0.003	0.002
	(1.827)	(0.828)	(0.503)	(0.431)	(0.453)	(0.360)
Time deposit rate	0.047	0.348***	0.286***	0.247***	0.220***	0.183***
	(0.413)	(3.951)	(3.561)	(3.313)	(3.131)	(2.727)
U.S. dollar time deposit rate	0.068	0.304***	0.276***	0.227***	0.216***	0.199***
	(0.677)	(3.847)	(3.703)	(3.145)	(3.160)	(3.016)
Treasury bill rate	0.043**	0.016	0.005	0.008	0.006	*0.010*
	(2.052)	(0.844)	(0.296)	(0.496)	(0.382)	(0.711)
Real Treasury bill rate	0.048*	0.018	–0.002	0.007	0.002	0.011
	(1.917)	(0.794)	(–0.096)	(0.350)	(0.118)	(0.648)
Inter-bank rate	–0.041	–0.035	–0.009	–0.016	–0.009	–0.012
	(–0.952)	(–0.980)	(–0.287)	(–0.566)	(–0.350)	(–0.469)
Monthly growth rate of CPI	–0.002	–0.001	0.000	0.001	0.002	–0.001
	(–0.200)	(–0.204)	(–0.052)	(0.134)	(0.318)	(–0.268)
Monthly growth rate of WPI	0.011	0.013	0.018	–0.007	–0.004	–0.005
	(0.693)	(0.977)	(1.523)	(–0.669)	(–0.392)	(–0.517)
Monthly growth rate of private WPI	0.008	0.006	0.007	0.008	0.005	0.003
	(1.113)	(0.939)	(1.286)	(1.553)	(1.129)	(0.693)
Monthly growth rate of public WPI	0.021	0.020	0.032***	0.031**	0.026*	0.019
	(1.353)	(1.523)	(2.769)	(2.881)	(2.515)	(1.894)
Monthly increase in industrial production index		0.029	0.019	0.027*	0.018	0.018
0.008						
	(1.472)	(1.132)	(1.838)	(1.281)	(1.397)	(0.658)

*Indicates 10% significance level.

**Indicates 5% significance level.

***Indicates 1% significance level.

t-statistics are reported in parentheses for the corresponding coefficient.

correlation with the dummy representing two months after elections. Thus, although the ratio of tax revenues to total revenues shows a statistically significant increase in the post-election period, the ratio of government expenditures continues to increase so that the budget deficit increases significantly in the post-electoral period.

Secondly, in the post-election period, the political-business cycles suggests a tight monetary policy to eliminate the inflationary effects of expansionary economic policies applied in the pre-election period. The empirical evidence presented in Table 6 suggests that the estimated co-

efficient for reserve money shows a statistically significant decrease after elections, while reserve money has the highest correlation with the dummy representing three months after elections. While the estimated coefficient of M1 increases insignificantly, the estimated coefficient of M2 and M2Y shows a statistically significant increase after elections. Thus, the empirical evidence does not support the hypothesis that tight a monetary policy is applied in the post-election period.

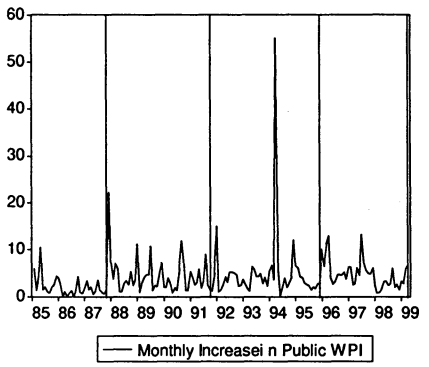
In the post-election period, the inter-bank rate behaves similarly to its pre-election behavior. The empirical evidence suggests that the estimated coefficient of the inter-bank rate decreases after elections, but the correlation between the inter-bank rate and election dummies is not statistically significant. As for the interest rates in the post-election period, an increase in the interest rates is expected due to the tight monetary policy, which may have been adopted. In fact, the empirical evidence suggests that the estimated coefficients of the three-month TL and U.S. dollar time deposit rate increase significantly after elections. Moreover, TL and U.S. dollar time deposit rates both have the highest correlation with the electoral dummies representing two months after the election. Although, the empirical evidence does not support contractionary policies in monetary aggregates in the post-election period, it supports the increasing interest rates. Thus, the incumbent government has manipulated the economy by using monetary supply aggregates in the pre-election period and by using interest rates in the post-election period. Furthermore, the empirical evidence suggests that the estimated coefficient of nominal treasury rates shows a statistically significant increase after elections, while the nominal treasury rate has the highest correlation with the dummy representing the first month after elections. The increase in the nominal treasury rate can be attributed to the increase in the budget deficit.

Thirdly, the empirical evidence suggests that the estimated coefficients of the CPI and the WPI are mixed for the post-election period, while the estimated coefficient of the monthly growth of the public sector WPI shows a statistically significant increase. In fact, it has the highest correlations with the electoral dummy representing four months after elections. The estimated coefficient of the private WPI increases in the post-election period, but the correlation between the private WPI and post-electoral dummies does not turn out to be significant.

In fact, as shown in Figure 1, the increase the in monthly growth of the public sector WPI after elections can be detected easily. The vertical

Figure 1

Monthly Increase in the Public Sector WPI



lines represent the election times. Thus, the empirical evidence supports the hypothesis that inflation increases in the post-election period in the public sector.

As mentioned before, although the public sector WPI decreases prior to elections, it increases statistically significantly after elections. However, the same behavior cannot be observed in the private sector WPI. Therefore, to examine the different behaviors of the two price indices, following Ozatay's view, another variable, wedge, is defined as the difference between the monthly logarithmic growths of public and private sector WPIs. Model 3 is estimated to examine the relationship between public and private WPIs before and after elections.

$$\text{wedge}_t = \alpha + \delta_{k_t} d_k + \sum_{i=1}^{11} \gamma_i s_{i_t} \tag{3}$$

where d_{kt} is the electoral dummy and s_i represents the monthly seasonal dummies.

Table 7 presents the empirical evidence by estimating Model 3 with both pre- and post-electoral dummies.[9] The empirical evidence suggests that the estimated coefficient for the wedge turns out to be negative in the pre-election period. Thus, the growth rate of the price level of public sector goods and services is lower than for private sector goods and services. In fact, Turkey has been suffering from high rates of inflation for 25 years, and the incumbent government has not wanted to increase social tensions before elections. Therefore, it has tried to keep the price

Table 7

Effects of Elections on the Wedge Between Public and Private Sector Inflation in the Pre-Election and Post-Election Periods

	d_1	d_2	d_3	d_4	d_5	d_6
Wedge between monthly growth rate of public and private WPI	–0.006 (–0.501)	–0.003 (–0.247)	–0.007 (–0.743)	–0.008 (–1.027)	–0.004 (–0.493)	–0.009 (–1.252)
	dp_1	dp_2	dp_3	dp_4	dp_5	dp_6
Wedge between monthly growth rate of public and private WPI	0.011 (0.903)	0.013 (1.240)	0.023** (2.510)	0.021** (2.505)	0.017** (2.218)	0.014* (1.855)

*Indicates 10% significance level.

**Indicates 5% significance level.

***Indicates 1% significance level.

t-statistics are reported in parentheses for the corresponding coefficient.

level of public goods and services below the general price level before elections. However, the empirical evidence suggests that the estimated coefficient of wedge becomes statistically significantly positive in post-election periods. Hence, the incumbent government lets public sector prices adjust to the general price level, causing the estimated coefficient of the gap between the public and private sector WPIs to become significantly positive after elections.

Finally, the empirical evidence presented in Table 6 suggests that the increase in the estimated coefficient of industrial production index is statistically significant in the post-election period. In fact, industrial production has the highest correlation with the post-electoral dummy representing three months after elections.

To sum up, in the post-electoral period, the government applies not only expansionary expenditure policies, but also tight revenue policies. Moreover, the growth rate of public sector goods and services shows a statistically significant increase. In fact, this increase is greater than the increase in the private sector. Therefore, the wedge of the growth rates

Table 8

ADF Unit Root Tests

Fiscal variables[1]	Level	Difference
Tax revenues	–4.027*	–
Direct taxes	–3.994*	–
Indirect taxes	–3.709*	–
Non-tax revenues	–4.674*	–
Other revenues	–4.280*	–
CB advances	–3.556*	–
Expenditures	–6.515*	–
Non-interest expenditures	–5.452*	–
Personnel expenditures	–3.737*	–
Investment expenditures	–3.471	–
Other current expenditures	–6.616*	–
Other transfers	–4.767*	–
Transfers to SEEs	–4.089*	–
Primary deficit	–5.452	–
Budget deficit	–6.514*	–
Monetary variables[2]	**Level**	**Difference**
Quasi-money	12.870*	–
Reserve money	1.057	–7.625*
M1	1.696	–6.524*
M2	2.873	–3.530*
M2Y	2.785	–3.669*
Reserve money	1.057	–7.625*
Time deposit rate	–1.511	–8.019*
U.S. dollar time deposit rate	0.533	–3.492**
Treasury rate	–1.789	–7.294*
Real treasury rate	–2.530	–5.263*
Inter-bank rate	–3.370**	–7.341*
Inflation and output indicators[2]	**Level**	**Difference**
CPI	1.292	–5.554*
WPI	2.010	–5.268*
Public WPI	1.746	–5.720*
Private WPI	1.882	–5.207*
Industrial production index	–2.032	–8.314*

1. All as a ratio to total revenues.
2. All in logarithms.

*Indicates null hypothesis of ADF test is rejected at 1% significance level.
**Indicates null hypothesis of ADF test is rejected at 5% significance level.

of public and private sector prices increases statistically significantly in the post-election periods.

Summary and Conclusions

This study aims to test the electoral PBC hypothesis in Turkey using monthly data from January 1985 to May 1999, including both fiscal and monetary indices and measures of economic performance. Pre- and post-electoral dummies are constructed to examine the effects of the elections on the policy instruments and economic outcomes, while an autoregressive model is estimated using electoral dummies.

Our research differs from the studies in the existing literature with respect to the following points. First, the data set is extensive, including all the important economic policy instruments and indicators, especially for budget items. Secondly, the extensive data set is monthly. Finally, the literature studies take into consideration only developed countries Thus, by considering a developing country to test the PBC hypothesis, this paper fills a gap in the literature. In fact, we found significant evidence to support the view that Turkey, a developing country, has electoral political-business cycles.

Empirical evidence provides statistically significant evidence of electoral political-business cycles in Turkey for various policy instruments and economic performance indicators. The first contribution of this paper to the literature is that the statistically significant empirical evidence supports the hypothesis of political-business cycles that expansionary fiscal policies are applied prior to elections. In fact, there is a statistically significant increase in government expenditures before elections. In addition to the significant increase in expenditures, tax revenues decrease significantly prior to election. As a consequence of both rising expenditures and declining tax revenues, primary and budget deficits increase statistically significantly before elections. Therefore, it can be concluded that the incumbent government has applied expansionary fiscal policies in Turkey in the pre-election period. Moreover, this result is consistent with other empirical studies in the literature (see Rogoff et al. 1997). The interesting point is that the expansionary fiscal policies continue after elections. The government expenditures increase so significantly that even though tax revenues increase significantly, budget deficits continue to increase after elections. In fact, the increasing budget deficit in the post-electoral period can be considered as an inheritance from

previous governments, which manipulated the economy with expansionary fiscal policies, because two of the elections resulted in a change in the ruling party. It is necessary to mention that the empirical evidence supporting electoral political-business cycles in fiscal variables is much stronger than the empirical evidence in any study done for various other countries.[10] The reason may be the institutional differences in procedures, such as the preparation, approval, and implementation of the budget among the countries that are discussed (see Alesina and Perotti 1995).

The second contribution of this paper to the literature on political-business cycles is that the empirical evidence provides statistically significant evidence supporting the hypothesis of political-business cycles that expansionary monetary policies are adopted in the pre-election period. In fact, money supplies such as M2 and M2Y have cyclic behaviors before elections and increase significantly, whereas, after elections, interest rates have significant cyclic behaviors in contrast to the pre-election period. In fact, TL and U.S. currency time deposit rates increase statistically significantly after elections. Moreover, due to the significant increase in budget deficits in pre- and post-election periods, treasury rates increase, as does the Treasury's ease of borrowing.

The third contribution of this paper to the PBC literature is that the empirical evidence supports the PBC hypothesis of increasing inflation in the post-election period. In fact, the increase in the public sector WPI is statistically significant after elections. There are three possible reasons for the significant increase in inflation after elections. The first one is that the government manipulates the economy with expansionary monetary policies, choosing its monetary policies so that the burden of the expansionary monetary policy will be realized with higher inflation after elections. The second reason is that inflation increases with a delay due to expansionary fiscal stimulation done before elections, and that the government adjusts fiscal standards with higher taxes after elections. The last reason is that the government tries to keep the price level of government goods and services low before elections so as not to increase social tensions. However, after elections, due to the first two reasons discussed above, the incumbent government can no longer keep public sector prices low. Therefore, it lets the public sector prices adjust to the general price level.

The empirical results presented in this paper are generally consistent with PBC theory. The empirical evidence suggests that the incumbent

government manipulated the Turkish economy in pre-election periods to increase its chances of reelection between 1985 and 1999.

Notes

1. Ozatay (1999) considered electoral political-business cycles in Turkey, but his data set includes a limited number of fiscal and monetary policy indices.

2. The cost of deficits can be very high, and the voters do not want to pay the bill of the deficit.

3. The democratic parliamentary system has been working efficiently since the last military interruption in 1980.

4. Primary deficit is defined as the difference between non-interest expenditures and total revenues.

5. In fact, in the empirical study, the effects of elections were tested for 12 months; the corresponding results will be provided by the authors upon request

6. See McCallum (1978), Alesina and Sachs (1988), Ito and Park (1988), Alesina, it al. (1993), and Heckelman and Berument (1998).

7. In fact, Hausman's (1978) Second Test is an F-test with the restriction $d * k = 0$.

8. For instance, taxes such as VAT depend on the consumption behavior of the agents, which the government cannot directly control.

9. In the empirical study, pre- and post-electoral effects on the wedge for 12 months were also considered; the results will be provided by the authors upon request

10. In literature, although expansionary fiscal policies are suggested prior to elections, the empirical evidence, especially for sub-components of expenditure and revenues, is rarely statistically insignificant.

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